

## **Editor's column**

Marian J. Roche

The National Security Agency's (NSA) Technology Transfer Program (TTP) was created in 1990, under the authority of the Technology Transfer Act of 1986. The TTP provides a venue for NSA inventors to share federally funded intellectual property and to conduct collaborative research with private industry, academia, nonprofits, other federal agencies, and state and local governments. The TTP is managed by the Technology Transfer Office located within NSA's Research Directorate.

Technology transfer can take on many different forms from licensing patents to providing scientific personnel in training and mentoring roles. However, collaboration is the key to successful technology transfer, and NSA recognized early on the value of its partnerships as well as the benefit of collaborative research and development (R&D). As a result, NSA actively seeks partners who are willing to license or continue R&D on the technologies within its large portfolio of patents and intellectual property. This portfolio encompasses a broad spectrum of technologies and scientific disciplines but is mostly concentrated within NSA's key areas of expertise including acoustics, communications, advanced mathematics, computer technology, information processing, networking, security, microelectronics, optics, and signals processing. (See page 2 for expanded descriptions of these areas of expertise, including examples.)

NSA's TTP utilizes several mechanisms including the following:

- Patent License Agreements (PLAs)—The goal of a PLA is to provide the private sector with the opportunity to commercially develop federally funded research to promote economic growth and global competitiveness.
- Cooperative Research and Development Agreements (CRADAs)—A CRADA provides NSA and the collaborating partner the opportunity to engage in joint research and development efforts, sharing the risks and benefits.

- Educational Partnership Agreements (EPAs)—An EPA allows NSA to share its unique experience by providing training to personnel in the science and technology fields at all education levels.
- Technology Transfer Sharing Agreements (TTSAs)— A TTSA allows NSA to transfer technology to other government agencies while protecting its rights.

For expanded descriptions of the TTP mechanisms, see page 4.

Broadly speaking, federal technology transfer exists to cycle the benefits of federally funded R&D back into the US economy, bringing new products to market, creating jobs, and increasing the industrial base. However, NSA's TTP provides additional benefits for the agency, its employees, and its partners. The most notable benefit is the ability to collaborate with outside technical experts and resources to help accomplish NSA's mission-oriented activities. Other benefits include providing NSA facilities and equipment for R&D efforts and the opportunity for university researchers, educators, and students to gain valuable learning experiences from collaboration with leading NSA scientists and researchers.

Perhaps the most intriguing benefit for the inventors is the reward and recognition. Technology transfer legislation allows NSA employees to receive monetary rewards for filing patents and to receive a percentage of any royalty payments from licensees.

Technology transfer has been one of the cornerstones supporting the agency's mission for over 20 years. NSA's early interest in cryptanalytic research led to the first large-scale computer and the first solid-state computer. NSA pioneered efforts in flexible storage capabilities, which led to the development of the tape cassette. NSA also made ground-breaking developments in semiconductor technology and remains a world leader in many technological fields.

If past successes are an indication of things to come, the future of NSA's TTP is very bright. Startling new technologies are being developed and the intellectual property portfolio is growing. New relationships and partnerships are being developed. At the National Security Agency, PLAs, CRADAs, EPAs, and TTSAs are industry's access to innovation.

For more information about technology transfer or the TTP, visit www.nsa.gov/research/tech\_transfer, or contact us:

National Security Agency Technology Transfer Program 9800 Savage Road, Suite 6541 Fort George G. Meade, MD 20755–6541 tech\_transfer@nsa.gov

Mariaw Porke

Technology Transfer Program, NSA

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